WHAT IS CLAIMED IS:

1. A method for producing images of an object comprising:

dynamically helically scanning an object on a moving table utilizing a scanning imaging system;

acquiring and storing projection views of the object and corresponding table locations;

selecting a plane for reconstruction of an image of the object;

utilizing stored table locations to determine geometric variables applicable to the stored projection views; and

filtering and backprojecting the stored projection views utilizing the geometrical variables to reconstruct an image of the object at the reconstruction plane.

2. A method in accordance with Claim 1 wherein the scanning imaging system is a magnetic resonance imaging system.

3. A method in accordance with Claim 1 wherein the scanning imaging system is a computed tomographic imaging system.

4. A method in accordance with Claim 1 further comprising utilizing feedback to adjust table speed during the dynamical helical scan.

5. A method for producing images of an object comprising:

dynamically helically scanning an object on a moving table utilizing a scanning imaging system;

acquiring and storing projection views of the object and, for only some of the acquired projection views, corresponding determined or estimated table locations;

selecting a plane for reconstruction of an image of the object;

utilizing stored table locations to determine geometric variables applicable to the stored projection views; and

filtering and backprojecting the stored projection views utilizing the geometrical variables to reconstruct an image of the object at the reconstruction plane.

6.   A method in accordance with Claim 5 wherein the scanning imaging system is a magnetic resonance imaging system.

7.   A method in accordance with Claim 5 wherein the scanning imaging system is a computed tomographic imaging system.

8.   A method in accordance with Claim 5 wherein said utilizing stored table locations to determine geometric variables applicable to the stored projection views comprises utilizing interpolation to estimate table locations between stored projection views lacking a corresponding determined or estimated table location.

9.   A method in accordance with Claim 8 wherein said interpolation is a linear interpolation.

10.   A method in accordance with Claim 8 wherein said interpolation is a nonlinear interpolation.

11.   A method in accordance with Claim 5 wherein said geometric variables include a location of an x-ray tube and detector relative to the image reconstruction plane.

12.   A method in accordance with Claim 11 wherein the scanning imaging system is a computed tomographic imaging system having a rotating gantry, and said method further comprises:

determining a center view for a selected image location for the projection views utilizing gantry locations of the projection views;

determining a weight for each projection view for the selected image location;

determining final helical weights using the determined weights for each projection view; and

weighting the stored projection views utilizing the determined final helical weights;

and further wherein filtering and backprojecting the stored projection views comprises filtering and backprojecting the weighted stored projection views.

13. A method in accordance with Claim 12 wherein said determining a weight for each projection view comprises determining a halfscan weight for each projection view.

14. A method in accordance with Claim 5 further comprising utilizing feedback to adjust table speed during the dynamical helical scan.

15. An imaging apparatus configured to:

dynamically helically scan an object on a moving table;

acquire and store projection views of the object and corresponding table locations;

utilize stored table locations to determine geometric variables applicable to the stored projection views; and

filter and backproject the stored projection views utilizing the geometrical variables to reconstruct an image of the object at a selected reconstruction plane.

16. An apparatus in accordance with Claim 15 wherein said apparatus is a magnetic resonance imaging system.

17. An apparatus in accordance with Claim 15 wherein said apparatus is a computed tomographic imaging system.

18. An apparatus in accordance with Claim 15 further configured to utilize feedback to adjust table speed during the dynamical helical scan.

19. An imaging apparatus configured to:

dynamically helically scan an object on a moving table;

acquire and store projection views of the object and, for only some of the acquired projection views, corresponding determined or estimated table locations;

utilize stored table locations to determine geometric variables applicable to the stored projection views; and

filter and backproject the stored projection views utilizing the geometrical variables to reconstruct an image of the object at a selected reconstruction plane.

20. An apparatus in accordance with Claim 19 wherein said apparatus is a magnetic resonance imaging system.

21. An apparatus in accordance with Claim 19 wherein said apparatus is a computed tomographic imaging system.

22. An apparatus in accordance with Claim 19 wherein to utilize stored table locations to determine geometric variables applicable to the stored projection views, said apparatus is configured to utilize interpolation to estimate table locations between stored projection views lacking a corresponding determined or estimated table location.

23. An apparatus in accordance with Claim 22 wherein said interpolation is a linear interpolation.

24. An apparatus in accordance with Claim 22 wherein said interpolation is a nonlinear interpolation.

25. An apparatus in accordance with Claim 19 further comprising an x-ray tube and a detector, and wherein said geometric variables include a location of said x-ray tube and said detector relative to the image reconstruction plane.

26. An apparatus in accordance with Claim 25 wherein said apparatus is a computed tomographic imaging system having a gantry configured to rotate said x-ray tube and said detector around said object, said apparatus further configured to:

determine a center view for a selected image location for the projection views utilizing gantry locations of the projection views;

determine a weight for each projection view for the selected image location;

determine final helical weights using the determined weights for each projection view; and

weight the stored projection views utilizing the determined final helical weights;

and further wherein to filter and backproject the stored projection views, said apparatus is configured to filter and backproject the weighted stored projection views.

27. An apparatus in accordance with Claim 26 wherein to determine a weight for each projection view, said apparatus is configured to determine a halfscan weight for each projection view.

28. An apparatus in accordance with Claim 19 further configured to utilize feedback to adjust table speed during the dynamical helical scan.